



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

earth created complete darkness until 7 o'clock.* Several blocks of stone broke windows of the Observatory. Last night the earthquake shocks were stronger and more frequent than yesterday, and displaced the seismic apparatus. Yesterday afternoon and this morning torrents of sand fell. While I am telegraphing several balls of fire rise with loud rumbling from the enlarged craters and the new elevated crevasses.

April 10.—Professor Matteucci reported from the Observatory:

Last night was calm except for a few explosions of considerable force from time to time. At 4 o'clock this morning the explosions became more violent. The seismic instruments of the Observatory record strong disturbances in the interior of the mountain.

April 11.—Vesuvius became comparatively quiet.

CHANGES ON THE EARTH'S SURFACE.

Studies of the surface of the earth have never been so numerous or so varied as at present. There are still many gaps unfilled, however, and Richard Tronnier, head-master at Hamm, Westphalia, has called attention to some of them (*Pet. Mitteil.*, No. 2, 1906). While the atmosphere and the hydrosphere, on account of their circulation and large practical interest, have had the lion's share of attention, there are phases of the phenomena of the earth's crust which are only beginning to receive due investigation. Periodicals devoted to seismology, for example, are of recent establishment. In addition to the study of tectonic changes, to which great attention has been given, investigators have been chiefly concerned in such modifications of the earth's surface as are made by the changing boundaries between land and sea, the growth of deltas, the spreading boundaries of cities, etc.

Tronnier believes it is highly important that systematic efforts should be set on foot to collect in a systematic manner the facts concerning the changes of the earth's surface constantly going on before our eyes, and he thinks that these data, scientifically collected and arranged, would form an important document in the history of our planet. He presents a considerable number of occurrences reported last year as illustrations of the work which, he suggests, should be done. A number of them may be referred to:

The steamer *City of Panama* reported in January that in $16^{\circ} 15' N.$ and $100^{\circ} 29' W.$ she had passed through an area, a mile wide, that was so thickly covered with trees, plants and the bodies of animals that she could hardly force her way. It has been suggested that this phenomenon may have been caused by the destruction of one or more of the islands of the uninhabited Revilla Gigedo group.

The island Nushima was seen by the natives of some of the Bonin Islands to rise above the surface of the Pacific on Nov. 14, 1904. It finally attained a height of 480 feet. It was found in July, 1905, that the island had gradually become reduced in size until its highest point was only 10 feet above the sea and its periphery had greatly decreased. It was thought that in a few weeks more it would entirely disappear.

* The language is dark, like the sand.

The island Milli, in the Pacific, was almost entirely destroyed by the assaults of winds and waves, only a wretched sand-waste remaining.

The Portuguese fishing-port and watering-place Espinho became, to a large extent, the prey of great sea waves that kept eating away the banks and undermining houses, and, at the end of January, the destruction was augmented by a hurricane that destroyed 81 houses. It was believed that the existence of the entire town was threatened.

Early in the year a strip of coast near Dover, England, fell into the sea. The area of rock was estimated to weigh 250,000 tons. It was the largest rock-slide on that coast in a half century.

Fifty-eight persons were killed by a landslide from a mountain overlooking Lake Loen in Norway, the displaced waters overwhelming a town on the opposite shore and carrying a small steamer 300 meters inland.

On Nov. 5, about 15 acres of land on the edge of Moen Island slipped into the Baltic Sea. The land, with the forest that partly covered it, was valued at 10,000 crowns.

The Rio Grande changed its course for a distance of several miles, placing the United States town La Mesa on the Mexican side of the river.

The Spitzberg, a small eminence near Krielow, Prussia, often climbed by tourists for the fine view it afforded of the Havel valley, was entirely removed by a railroad company.

These examples include changes wrought by the sea on islands and coasts, by rock-slides and flowing water on the land, and by human agency on a feature of the topography.

The single-handed observer can do little of permanent value in the collation of accurate data relating to such occurrences as these; but there is a great opportunity for the organization of systematic work in this new field.

Dr. Supan, commenting upon the suggestion offered by Mr. Tronnier, says that it should be favourably received, that it is well worth the attention of the next International Geographical Congress at Geneva, and that it is to be hoped that the difficult question of the organization of such observations, to be carried on all over the world, will, at least, make important progress towards solution at that meeting.

LAST YEAR'S WORK OF THE MICHIGAN GEOLOGICAL SURVEY.

During the summer of 1905 joint topographic work was continued in connection with the U. S. Geological Survey, first around Marquette, under J. M. Whitman. Here the work proved to be of unexpected difficulty and complexity; but it is hoped that the resultant map will be of a high degree of accuracy and interest. In the Lower Peninsula the topographic work now completed includes not only the Ann Arbor quadrangle, but a strip east of the international boundary, and most of this is either published or will be in a few weeks. The work is now being extended northward around Pontiac. A detailed map of the Black River from Bessemer north to Lake Superior has been prepared by W. C. Gordon to illustrate the cross-